

## ABSTRACT OF THE DISCLOSURE

In the manufacturing apparatus of printed wiring board of the invention, the aperture of the nozzle pipe located in the central position is larger than that at both sides, or the aperture of the piping pipe to the nozzle pipe in the central position is larger than that of the piping pipes at both sides. The mutual interval is narrower in the central nozzle pipes. The interval of the individual nozzle pipes is variable, and is also variable in the vertical direction. A pressure-proof flexible tube is provided between each nozzle pipe and the pump, and the interval of the individual nozzle pipes is variable, and is also variable in the vertical direction. Further, the spray pressure, oscillating angle, and oscillating speed can be set individually in each nozzle pipe, and such setting can be automated. By such manufacturing apparatus and manufacturing method using the same, the apparatus is manufactured at low cost, and is simple and widely used, and further the etching precision of upper and lower surfaces is uniform without lowering the productivity, and the printed wiring boards of high density and high precision can be manufactured at high yield.